

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
29 December 2004 (29.12.2004)

PCT

(10) International Publication Number
WO 2004/113512 A3

(51) International Patent Classification⁷: **C12N 5/06**

(21) International Application Number:
PCT/BE2004/000089

(22) International Filing Date: 21 June 2004 (21.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03447164.9 20 June 2003 (20.06.2003) EP

(71) Applicant (for all designated States except US): **VRIJE
UNIVERSITEIT BRUSSEL** [BE/BE]; Pleinlaan 2,
B-1050 Brussel (BE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BOUWENS,
Luc** [BE/BE]; Duvelsborreweg 1, B-1653 Dworp (BE).
BAEYENS, Luc [BE/BE]; Stationstraat 22, B-1730 Asse
(BE).

(74) Agents: **BIRD, William, E.** et al.; Bird Goën & Co, Klein
Dalenstraat 42A, B-3020 Winksele (BE).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report
— before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
31 March 2005

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF GENERATING ISLET BETA-CELLS FROM EXOCRINE PANCREATIC CELLS

(57) Abstract: The present invention discloses an *in vitro* method wherein mammalian beta-cell differentiation can be induced in dedifferentiated exocrine pancreatic cells in a medium comprising ligands of the EGF receptor and the GP130 receptor, such as EGF and LIF. Insulin secreting cells, obtainable by this method, provide a means for the treatment of diabetes by islet transplantation.

BEST AVAILABLE COPY

WO 2004/113512 A3